

CHAPTER 2 PROJECT PLANNING

2-1. Introduction.

a. This chapter presents guidance for the project team on government planning activities for OE projects. The purpose of government planning is to develop a strategy for each project that will ensure the achievement of project goals in a manner that is safe, timely, and cost-effective. Topics discussed in this chapter include the SOW, cost estimate, and project schedule.

b. Government planning activities require input from many different disciplines and should therefore be prepared in a manner that fully involves all affected disciplines. Quality excellence is achieved in government planning activities through the conscientious and cooperative efforts of each project team member.

2-2. Statement of Work. A SOW should be prepared for each project, whether it will be completed as a delivery order/task order to a contractor or as a work effort for an Army element.

a. Performance Objectives. The SOW identifies the specific work requirements for a particular project. The project team's performance objective is to develop a SOW that will serve as the basis for:

- (1) Developing a cost estimate either for budgetary purposes or for use in contract negotiations;
- (2) Defining clear, achievable, and contractually enforceable project requirements;
- (3) Obtaining successful project performance; and
- (4) Ensuring fair and effective administration of a contract or delivery order/task order.

b. Preparation.

(1) The project team is responsible for preparation of SOWs for site visits, EE/CAs, Removal Actions, UXO Support, and Time Critical Removal Actions (TCRAs) in coordination with the PM. The Design Center POC should ensure that the PM and all members of the project team are included in the preparation of the SOW. The OE MCX may be consulted to provide the appropriate statements or paragraphs concerning background and authority for the work described in the SOW.

(2) When preparing the SOW, the project team should consult the Inventory Project Report (INPR), Archives Search Report (ASR), previous investigation reports, and information gathered

during the site visit (see Chapter 4 of this manual) for site-specific information. Attachment 2-1 is a checklist to aid in the preparation of the SOW.

c. Contents. The contents of a SOW depend on the type of OE project, the type of OE response action, and site-specific requirements. The following topics should generally be included in a SOW:

- (1) General responsibilities;
- (2) Project description;
- (3) Scope of services;
- (4) Schedule and deliverables;
- (5) Reviews and conferences;
- (6) Technical criteria and standards, including government-furnished information;
- (7) Administrative instructions;
- (8) General provisions; and
- (9) References.

d. SOW for Project Phases. The project team may need to develop a SOW for specific phases of a project. Project team considerations for site visit, EE/CA, and Removal Action SOWs are discussed below. More detailed information on SOW preparation is provided in subsequent chapters of this manual.

(1) SOW for Site Visit. A site visit may be required prior to the initiation of or as the first task of an OE project. Site visits are discussed in more detail in Chapter 4 of this manual.

(2) SOW for EE/CA Reconnaissance (RECON). Once funds have been received and following an evaluation of the site-specific data gathered during the Preliminary Assessment of Eligibility (PAE) and Site Inspection (SI) phases, the project team may decide to implement the optional RECON task. RECON is discussed in Chapter 6 of this manual. If the RECON task will be implemented, the project team will prepare a RECON SOW. Typical tasks included in a RECON SOW are:

- (a) Work Plan and Abbreviated Site Safety and Health Plan (ASSHP) (see Chapter 3);
- (b) Analysis of the ASR;

- (c) Spatial analysis (aerial survey);
- (d) Ground reconnaissance;
- (e) Technology evaluation; and
- (f) Analysis report/data archive.

(3) SOW for EE/CA. Once funds have been received, the project team may begin preparation of the SOW for the EE/CA phase. The SOW may not be awarded until the Approval Memorandum has been signed. If the EE/CA RECON task is implemented, the project team may use the results to modify/refine the EE/CA SOW or make a decision to move directly to the removal action without further study. Typical tasks included in an EE/CA SOW are:

- (a) Records review and land restriction assessment;
- (b) Work Plan, including SSHP and Institutional Analysis Plan (see Chapter 3);
- (c) Site preparation;
- (d) Site characterization (see Chapters 7 and 8);
- (e) Safety and public risk evaluation (see Chapters 10 and 11);
- (f) Preparation of the EE/CA report;
- (g) Preparation of the Action Memorandum; and
- (h) Community relations.

(4) SOW for Removal Action. Once funds have been received, the project team may begin preparation of the SOW for the Removal Action. The SOW may not be awarded until the Action Memorandum has been signed. It should comply with the approved Action Memorandum. Typical tasks included in an OE Removal Action SOW include:

- (a) Site visit (see Chapter 4);
- (b) Work Plan development (see Chapter 3);
- (c) Location surveying and mapping (see Chapters 8 and 9);
- (d) Site preparation (see Chapter 7);

23 Jun 00

- (e) Geophysical investigation prove-out (see Chapter 7);
- (f) Geophysical investigations (see Chapter 7);
- (g) Anomaly reacquisition (see Chapter 7);
- (h) Clearance action;
- (i) Institutional control activities and recurring reviews;
- (j) Turn-in; and
- (k) Preparation of the site-specific removal report.

e. Review and Approval. The Design Center POC should ensure that the SOW is in compliance with the signed Approval Memorandum (EE/CAs) or Action Memorandum (Removal Actions). The Design Center POC should direct SOWs to the appropriate personnel, including the PM and appropriate members of the project team, for review. Review comments should be provided in writing to the Design Center POC. Following review and approval in accordance with ER 1110-1-8153, the Design Center POC should submit the final SOW to the Contracting Officer (CO). The PM should provide the final SOW to the customer and stakeholders for review.

2-3. Cost Estimating.

a. General.

(1) Once the SOW is approved, a cost estimate should be prepared by personnel having expertise in the type of work involved on the project. The cost estimator should develop the estimate based on a detailed analysis of the SOW, assuming reasonable economy and efficiency, and modern and effective methods.

(2) In developing cost estimates, whether for budgets or contractor procurement purposes, a number of tools are available. Cost engineering offices at each district have cost estimating software, databases, and documents available to use in developing cost estimates at various phases. The recommended USACE software programs are Remedial Action Cost Engineering and Requirements System (RACER) 99 for parametric estimating and Micro Computer Aided Cost Engineering System (MCACES) Gold Version 5.3, MCACES for Windows, or Excel™ or LOTUS 123™ spreadsheets for detailed estimating.

b. Performance Objectives. The project team's performance objective is to prepare a cost estimate that is complete and of sufficient detail such that it can be used to:

- (1) Obtain program funding; or
- (2) Negotiate the award of a contract at a price that is fair and reasonable to the government.

c. Project Team Considerations and Cost Estimating Checklist.

(1) The project team should first identify the purpose of the cost estimate. If the purpose of the cost estimate is to obtain program funding, then a rough order of magnitude estimate may be prepared. If the purpose of the cost estimate is to award a contract, then a detailed cost estimate is required.

(2) Once the intended use of the estimate is identified, the cost estimator should consider the phase of the project and the following items which will impact project cost (this list is not intended to be all inclusive):

- (a) Size of areas of concern;
- (b) Site risk;
- (c) Type of ordnance;
- (d) Soil type;
- (e) Topography;
- (f) Vegetation type;
- (g) Ordnance density;
- (h) Required depth of clearance;
- (i) Amount of scrap;
- (j) Special environmental and safety concerns (e.g., presence of Chemical Warfare Materiel [CWM], requirements for engineering controls, sampling and analysis requirements such as air monitoring, etc.);
- (k) Production rates;
- (l) In-house or contracted;
- (m) Percent of property to be investigated;

23 Jun 00

- (n) Surveying methods (e.g., mag and flag, geophysical);
- (o) Data format requirements (i.e., digital or non-digital);
- (p) Personal Protective Equipment (PPE) level required;
- (q) Type of operation to be performed (e.g., search only or search and recovery);
- (r) Number and type of UXO technicians required;
- (s) Equipment and vehicles required (e.g., magnetometer, towed array, earth moving machinery, recovery vehicles);
- (t) Expected time duration;
- (u) Access restrictions;
- (v) Political considerations; and
- (w) Start date.

(3) This information may be derived from historical reports (e.g., the INPR and ASR) and previous investigations at the site. This information should also be compiled in the SOW, from which the estimate will be developed. Attachment 2-2 is a checklist that may be used by the cost estimator to aid in preparing a cost estimate for an OE project.

2-4. Project Schedule. The project schedule should be included in the SOW. The Design Center POC should develop the project schedule in cooperation with the PM. The project team should provide the Design Center POC with estimates for the duration of each task required in the SOW. These estimates should be used by the PM to establish dates for project deliverables and the overall project schedule. The project team should provide agreement or comments on the schedule established by the PM.

ATTACHMENT 2-1
STATEMENT OF WORK PREPARATION CHECKLIST

Project Name: _____
Project Location: _____
Design Center POC: _____
Preparer's Name and Title: _____
Date of Preparation: _____

	Y	N	N/A
<u>All SOWs:</u>			
1. Has the authorization and funding been received for SOW preparation?	_____	_____	_____
2. Has the Design Center POC held a pre-scoping meeting with the project team to discuss project requirements and to determine required resources?	_____	_____	_____
3. Have project requirements been identified through interfacing with the PM?	_____	_____	_____
4. Do the personnel responsible for preparing the SOW have a detailed knowledge of the project history, site conditions, characteristics of UXO anticipated and of geophysical methods?	_____	_____	_____
5. Has existing site information been provided to the project team (may include ASR, previous site investigation reports, information from site visits, information from district contractors that have worked on the site in the past, etc.)?	_____	_____	_____
6. Have the requirements for the site visit been met (i.e., right of entry, ASSHP, etc. - see Chapter 4 of this manual)?	_____	_____	_____
7. Have federal, state and local regulatory requirements been identified in the SOW?	_____	_____	_____

	Y	N	N/A
8. Has an appropriate schedule has been included in the SOW?	_____	_____	_____
9. Has the OE MCX reviewed the SOW?	_____	_____	_____
10. Are the following general included in the SOW:			
• General responsibilities of the contractor?	_____	_____	_____
• Project description?	_____	_____	_____
• Scope of services?	_____	_____	_____
• Schedule and deliverables?	_____	_____	_____
• Reviews and conferences?	_____	_____	_____
• Technical criteria and standards, including government furnished information?	_____	_____	_____
• Administrative instructions?	_____	_____	_____
• General provisions?	_____	_____	_____
• References?	_____	_____	_____
11. Have review comments been obtained from appropriate personnel, including PM and project team members, in accordance with ER 1110-1-8153?	_____	_____	_____
12. Has the SOW been approved in accordance with ER 1110-1-8153 and submitted final SOW to the Contracting Officer?	_____	_____	_____
13. Was an external review of the SOW performed?	_____	_____	_____
14. If the SOW is prepared for a removal action, did it clearly identify if the contractor is responsible for the preparation of an ESS?	_____	_____	_____

	Y	N	N/A
<u>SOW for EE/CA RECON</u>			
1. Have the following tasks, as applicable, been included in the EE/CA RECON SOW: (See Chapter 6 of this manual for additional information)			
• Work Plan and ASSHP (see Chapter 3 of this manual)?	_____	_____	_____
• Analysis of the ASR?	_____	_____	_____
• Spatial Analysis (aerial survey)?	_____	_____	_____
• Ground reconnaissance?	_____	_____	_____
• Technology evaluation?	_____	_____	_____
• Analysis report/data archive?	_____	_____	_____
<u>SOW for EE/CA</u>			
1. Have the following typical tasks, as applicable, been included in the EE/CA SOW:			
• Records review and land restriction assessment?	_____	_____	_____
• Project Work Plan, including SSHP and Institutional Analysis Plan (see Chapter 3 of this manual)?	_____	_____	_____
• Site preparation?	_____	_____	_____
• Site characterization (see Chapters 7 and 8 of this manual)?	_____	_____	_____
• Safety and public risk evaluation (see Chapters 10 and 11 of this manual)?	_____	_____	_____
• Preparation of the EE/CA report?	_____	_____	_____
• Preparation of the Action Memorandum?	_____	_____	_____
• Community relations?	_____	_____	_____
2. Is the SOW in compliance with the Approval Memorandum?	_____	_____	_____

	Y	N	N/A
<u>SOW for Removal Action</u>			
1. Have the following typical tasks, as applicable, been included in a Removal Action SOW:			
• Site visit (see Chapter 4 of this manual)?	_____	_____	_____
• Work Plan development (see Chapter 3 of this manual)?	_____	_____	_____
• Location surveying and mapping (see Chapters 8 and 9 of this manual)?	_____	_____	_____
• Site preparation (see Chapter 7 of this manual)?	_____	_____	_____
• Geophysical investigation prove-out (see Chapter 7 of this manual)?	_____	_____	_____
• Geophysical investigation (see Chapters 7 of this manual)?	_____	_____	_____
• Anomaly reacquisition (see Chapter 7 of this manual)?	_____	_____	_____
• Clearance action?	_____	_____	_____
• Institutional control activities and recurring reviews?	_____	_____	_____
• Scrap turn-in?	_____	_____	_____
• Preparation of site-specific removal report?	_____	_____	_____
2. Is the SOW in compliance with the Action Memorandum?	_____	_____	_____

ATTACHMENT 2-2
COST ESTIMATE PREPARATION CHECKLIST

Project Name: _____
Project Location: _____
Design Center POC: _____
Preparer's Name and Title: _____
Date of Preparation: _____

	Y	N	N/A
<u>Prior to beginning work on cost estimate</u>			
1. Is the cost estimate being prepared for internal budgetary purposes (i.e., to obtain program funding)? If yes, a rough order of magnitude estimate may be prepared.	_____	_____	_____
2. Is the cost estimate being prepared for contract procurement (i.e., for use in contract negotiations)? If yes, a detailed cost estimate is required.	_____	_____	_____
3. Has the SOW been developed and approved?	_____	_____	_____
4. Have the phase of the project and the following items which will impact project cost (this list is not intended to be all inclusive) been considered:			
• Size of areas of concern?	_____	_____	_____
• Site risk?	_____	_____	_____
• Type of ordnance?	_____	_____	_____
• Soil type?	_____	_____	_____
• Topography?	_____	_____	_____
• Vegetation type?	_____	_____	_____
• Ordnance density?	_____	_____	_____
• Required depth of clearance?	_____	_____	_____
• Amount of scrap?	_____	_____	_____

23 Jun 00

	Y	N	N/A
• Special environmental and safety concerns (e.g., presence of CWM, requirements for engineering controls, sampling and analysis requirements such as air monitoring, etc.)?	_____	_____	_____
• Production rates?	_____	_____	_____
• In-house or contracted?	_____	_____	_____
• Percent of property to be investigated?	_____	_____	_____
• Surveying methods?	_____	_____	_____
• Data format requirements (i.e., digital or non-digital)?	_____	_____	_____
• PPE level required?	_____	_____	_____
• Type of operation to be performed (e.g., search only or search and recovery)?	_____	_____	_____
• Number and type of UXO technicians required?	_____	_____	_____
• Equipment and vehicles required (e.g., magnetometer, towed array, earth moving machinery, recovery vehicles)?	_____	_____	_____
• Expected time duration?	_____	_____	_____
• Access restrictions?	_____	_____	_____
• Political considerations?	_____	_____	_____
• Start date?	_____	_____	_____